

Preparing Successful Proposals for Upcoming Energy Efficiency Solicitations in California

September 18, 2017

PG&E Pacific Energy Center

San Francisco, CA

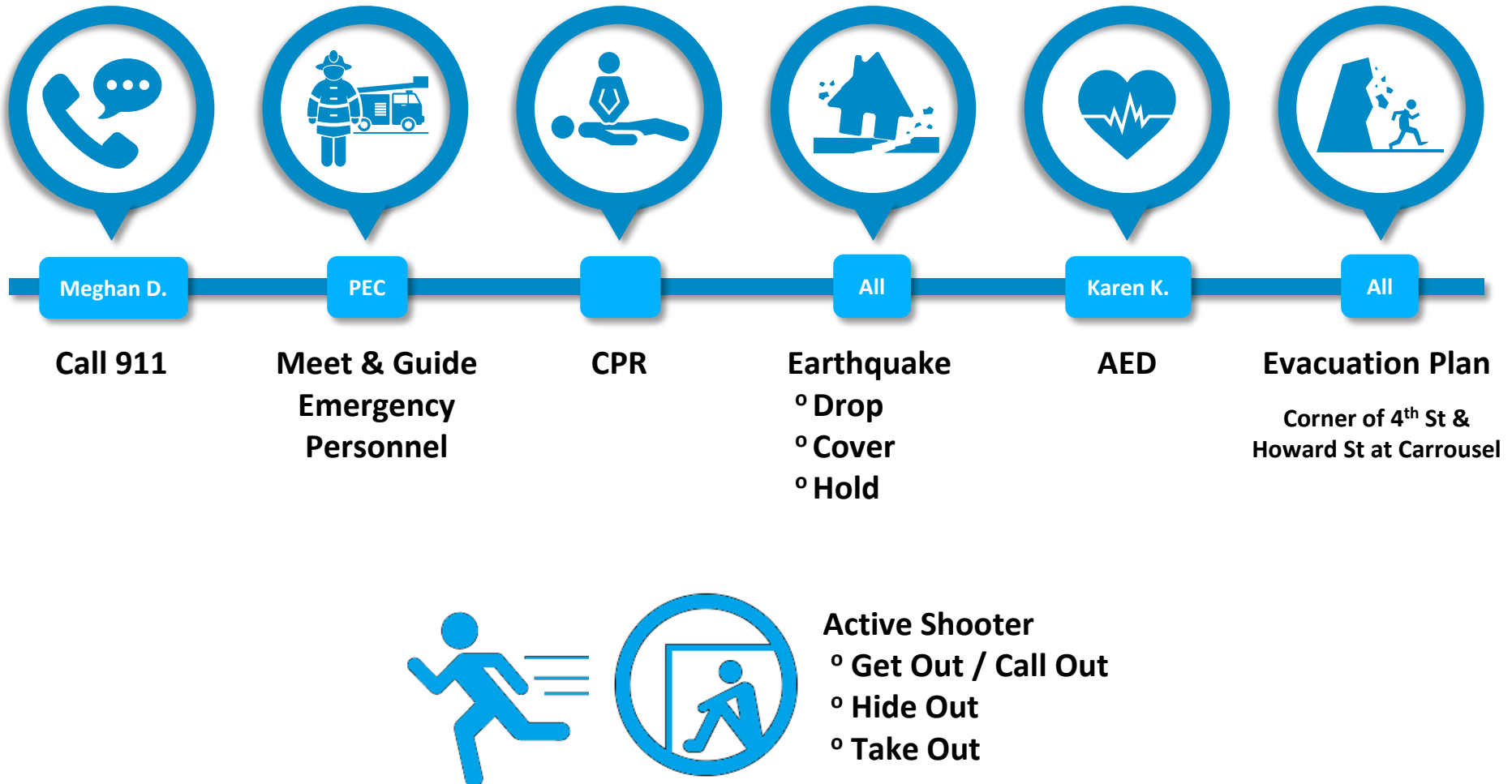
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Safety Protocols



Agenda

Time	Topic	Speaker
9:00 AM	Welcome & Introduction	Karen Zelmar Margie Gardner
9:10 AM	Networking Ice Breaker	All
9:20 AM	Request for Proposals (RFP) Process Basics	Matt Braunwarth
10:00 AM	Qualifications & Supply Chain Responsibility	IOU Panel
11:00 AM	Platforms and How to Measure Savings (California Style!)	Marcela Fox Ryan Chan
12:00 PM	A Case Study and Call for Networking: PG&E's Residential Pay for Performance (P4P)	Leif Magnuson
12:15 PM	Lunch	All
1:15 PM	Group Exercise	All
2:00 PM	Overview of Cost Effectiveness	Jenny Roecks Doug Naaf
2:30 PM	Evaluation: The Basics	Lucy Morris Robert Kasman Brian Arthur Smith
3:00 PM	Q&A	All
3:45 PM	Participant Feedback (Plus/Delta)	All
4:00 PM	Adjourn to informal, no-host Happy Hour	All

Welcome and Introduction

Karen Zelmar

Director, PG&E Energy Efficiency Portfolio Management

Margie Gardner

Executive Director, California Efficiency + Demand Management Council



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Today's Workshop

Purpose

Provide high-level assistance on how to navigate the IOU contracting process, and suggestions on how to successfully develop proposals

Objectives

Participants develop general understanding of:

- Basic qualifications to participate in contracting process
- Solicitation plans and opportunities in new energy efficiency paradigm
- Resources to develop creative and compliant program proposals

Networking Ice Breaker

Meet your neighbors!

Introduce yourselves to your table group. Take 1 minute each to include the following:

- Your name
- Company
- Key services, products, or offerings
- 1 random fun fact!



Request for Proposals (RFP) Process Basics

Matt Braunwarth

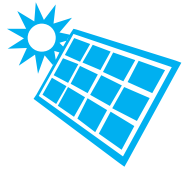
Principal, Energy Efficiency Portfolio Management



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Overall Goals of Outsourcing Strategy

Providing a smooth transition into a new third-party program approach through a set of phased program solicitations.



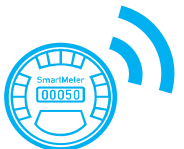
Innovation



Cost Effectiveness



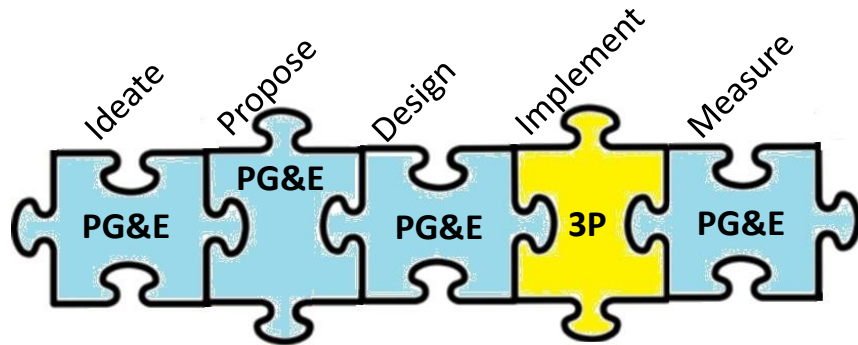
Vibrant EE Ecosystem



New Contracting Opportunities

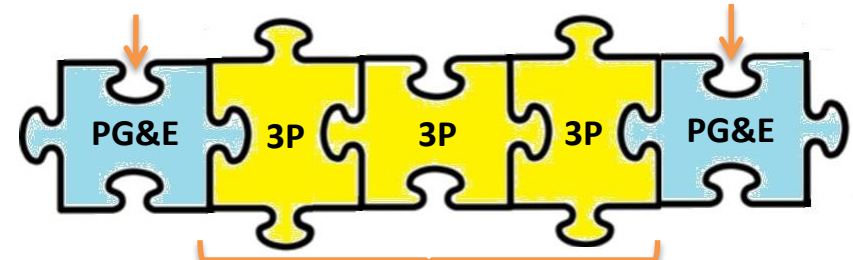
How Will This Be Different From Before?

Third Party as Program Implementer



IOU describes
portfolio need

IOU measures
performance

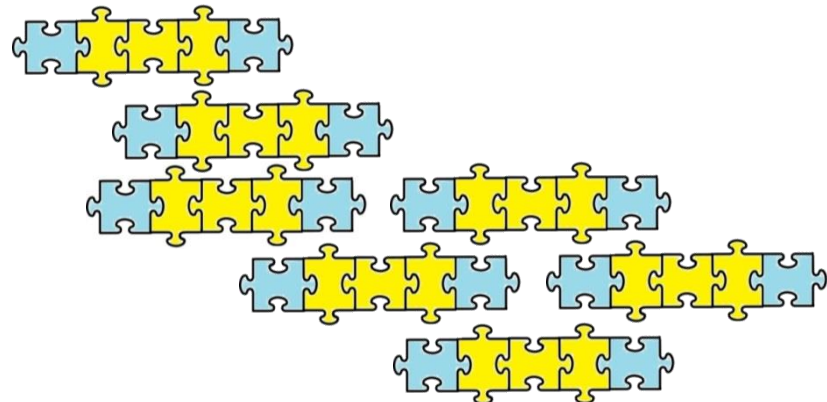


3P Implementers must:

- Propose
- Design
- Implement
- Comply

IOU as Portfolio Administrator

- Fit all the pieces together



Overview of Utility Procurement Processes

**Request for
Abstract (RFA)**

2-3 Months

**Contract Opportunity
Announcement (COA)**

Bidders Conference

Abstract Scoring

**Request for
Proposal (RFP)**

8-12 Months

Bidders Conference

Proposal Scoring

**Implementer
Interviews (optional)**

**Shortlisting &
Negotiations**



Contract Opportunity Announcement



SOUTHERN CALIFORNIA
EDISON

An *EDISON INTERNATIONAL*® Company



PEPMA

PROPOSAL EVALUATION & PROPOSAL
MANAGEMENT APPLICATION



A  Sempra Energy utility®



A  Sempra Energy utility

All Participants Submitting a Bid Package Will Do So Through the Power Advocate Platform

- Download Documents
- Upload Documents
- All Communications
- Q&A

Intended to communicate the information and requirements set forth in the RFP materials

- Goals and Priorities
- Timeline
- Process
- Evaluation Criteria
- Offer Submittal Process
- Communication Channels
- Interactive Q&A



What is in an Abstract?

What is in a Proposal?

Potential RFP Scoring Criteria

Proposals may be evaluated against some of the criteria listed below

- Program Viability & Quality
- Company Experience
- Price
- Supply Chain Responsibility
- Sustainability
- Safety

IOUs will select winning contractors who offer the best overall value for program execution and portfolio fit.

www.caeecc.org

HOME | COORDINATING COMMITTEE | REGULATORY DOCUMENTS | BP AND IP INFO | MEETINGS | More

Welcome to the California Energy Efficiency Coordinating Committee Website

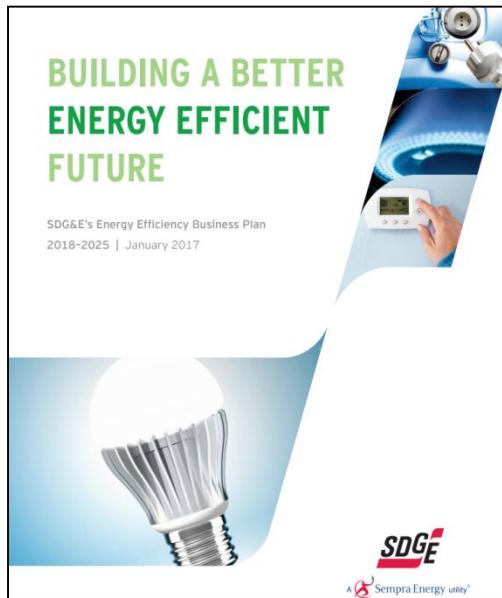
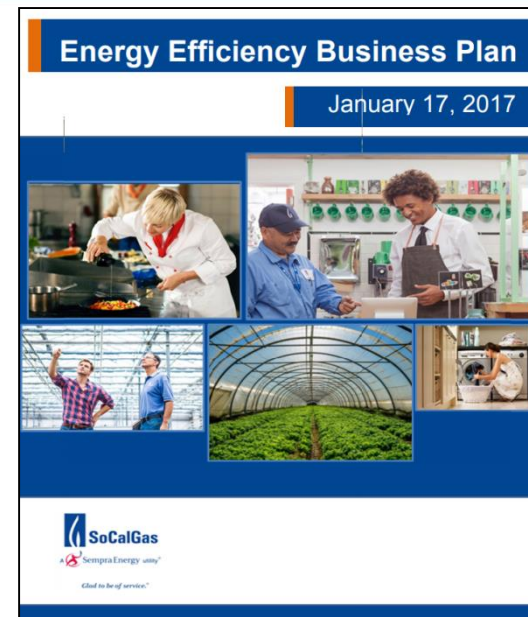
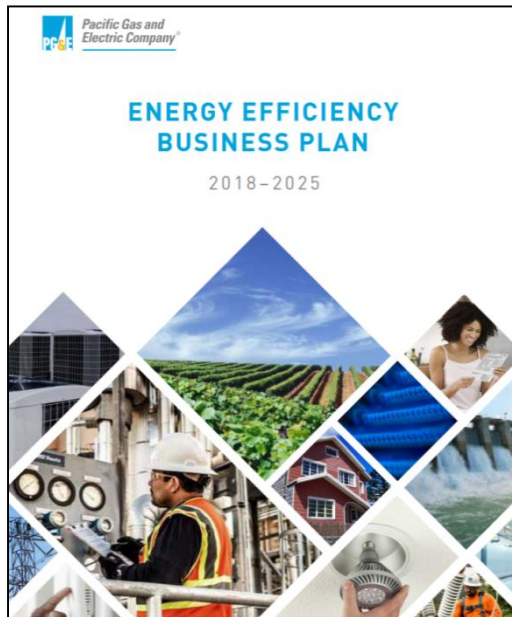
The California Energy Efficiency Coordinating Committee (CAEECC) and its subcommittees were authorized by California Public Utilities Commission (CPUC) Decision 15-10-028. This forum is the venue by which stakeholders can provide input into the development of the Program Administrators' energy efficiency Business Plans, Implementation Plans, and related matters that are central to Energy Efficiency portfolios approved by the CPUC.

Upcoming Events

SEP 7	CEC Integrated Energy Policy Report Workshop: Draft Commission Report to Establish Targets that Achieve a Statewide Cumulative Doubling of Energy Efficiency Savings in 2030 -- This is not a CAEECC event
	☐ Thursday, September 7
	🕒 10:00am-10:00am
	📍 Energy Commission's Art Center

Add yourself to R.13-11-005 Service List

Read the IOUs' Business Plans!



Application No.: A.17-01-013
Exhibit No.: SCE-02
Witnesses: G. Barsley,
J. Mack,
K. Rodriguez,
M. Thomas,
M. Wallenrod,
T. Weber,
K. Wood



(U 338-E)

***Southern California Edison Company's Amended
Energy Efficiency Rolling Portfolio Business Plan For
2018-2025***

Before the
Public Utilities Commission of the State of California

Review Updates to Sections in our Business Plans



Get to Know Key Resources...

1

Program

- [CA Energy Efficiency Strategy Plan](#) (CEESP)
- [CA Existing Buildings Action Plan](#) (AB 758)
- [EE Policy Manual v.5](#)
- [CA Energy Efficiency Evaluation Protocols](#)
- [CA Measurement Advisory Council](#) (CALMAC)

2

Technical

- [Energy Efficiency Goals and Potential Studies](#)
- [California Energy Data and Reporting System](#) (CEDARS)
- [Ex Ante Review Custom Process Guidance Documents](#)
- [Database for Energy Efficiency Resources](#) (DEER)
- [Cost Effectiveness Tool](#) (CET)

3

Policy and Regulatory

- [D.13-11-005 Rulemaking](#)
- [D.14-10-046 2015 EE Program Budgets](#)
- [D.15-10-028 EE Rolling Portfolio Mechanics](#)
- [D.16-08-019 Guidance for EE Rolling Portfolio Business Plan Filings](#)
- [SB 350](#)
- [AB 802](#)
- [AB 793](#)
- [SB 1414](#)
- [SB 32](#)
- [Executive Order B-18-12](#)

Note: This list is not exhaustive. Find more resources in [IOUs' Business Plans](#) and on the [CPUC's website](#)

Business Plans Road to Approval!

9/26:
Final BP
Comments

10/13: Final
BP Reply
Comments

Nov:
Proposed
Decision

Dec: Final
Decision



Thank you! Questions?

Matt Braunwarth
MPBB@pge.com

Qualifications and Supply Chain Responsibility

IOU Panel

PG&E: David Pell, Jennifer Price

SCE: Eugene Ayuyao, Norm Bush

SDG&E: Kerriann Weaver



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IOU Panel: Qualifications and Supply Chain Responsibility

Pre-qualifications





Contract Opportunity Announcements

PEPMA

- [PEPMA](#)
- <https://www.pepma-ca.com/Public/ContractingOpportunities.aspx>

PG&E Resources

- [PG&E Contract Opportunity Announcements](#)
- https://www.pge.com/en_US/for-our-business-partners/purchasing-program/bid-opportunities/bid-opportunities.page

SoCalGas Resources

- [SoCalGas Contract Opportunity Announcements](#)
- <http://marketing.poweradvocate.com/>

SDG&E Resources

- [SDG&E Contract Opportunity Announcements](#)
- <https://www.sdge.com/request-proposals>

IOU Panel: Qualifications and Supply Chain Responsibility

Supplier Code of Conduct





Supplier Code of Conduct

PG&E Resources

- [PG&E Supplier Code of Conduct](#)
- <https://www.pge.com/includes/docs/pdfs/b2b/purchasing/suppliers/SupplierCodeofConductPGE.pdf>

SCE Resources

- [SCE Supplier Code of Conduct](#)
- https://www.sce.com/wps/wcm/connect/3204619e-a240-4ba6-be09-cf62304e5e58/SCE_CodeConductBookletPages.pdf?MOD=AJPERES

SoCalGas Resources

- [SoCalGas Sempra Energy Supplier Code of Conduct](#)
- <http://www.sempra.com/pdf/about/scc.pdf>

SDG&E Resources

- [SDG&E Sempra Energy Supplier Code of Conduct](#)
- <http://www.sempra.com/pdf/about/scc.pdf>

IOU Panel: Qualifications and Supply Chain Responsibility

Supply Chain Responsibility





Supply Chain Responsibility

PG&E Resources

- [PG&E Supply Chain Responsibility](#)
- https://www.pge.com/en_US/for-our-business-partners/purchasing-program/suppliers/supply-chain-responsibility/supply-chain-responsibility.page

SCE Resources

- [SCE Supply Chain Responsibility](#)
- <https://www.sce.com/wps/portal/home/partners/buying-selling/supply-chain-management>

SoCalGas Resources

- [SoCalGas Supply Chain Responsibility](#)
- <https://www.socalgas.com/for-your-business>

SDG&E Resources

- [SDG&E Supply Chain Responsibility](#)
- <https://www.sdge.com/business>

IOU Panel: Qualifications and Supply Chain Responsibility

Supplier Diversity





Supplier Diversity

PG&E Resources

- [PG&E Supplier Diversity](#)
- https://www.pge.com/en_US/for-our-business-partners/purchasing-program/suppliers/supply-chain-responsibility/faq.page

SCE Resources

- [SCE Supplier Diversity](#)
- <https://www.sce.com/wps/portal/home/partners/buying-selling/supplier-diversity>

SoCalGas Resources

- [SoCalGas Supplier Diversity](#)
- <https://www.socalgas.com/for-your-business/supplier-diversity>

SDG&E Resources

- [SDG&E Supplier Diversity](#)
- <https://www.sdge.com/our-company/about-us/supplier-diversity>

IOU Panel: Qualifications and Supply Chain Responsibility

Third Party Data Security





Third Party Data Security

PG&E Resources

- [PG&E Third Party Data Security](#)
- https://www.pge.com/en_US/residential/save-energy-money/analyze-your-usage/your-usage/view-and-share-your-data-with-smartmeter/reading-the-smartmeter/share-your-data/third-party-companies/frequently-asked-questions.page

SCE Resources

- [SCE Third Party Data Security](#)
- <https://www.sce.com/wps/wcm/connect/e5cd38b4-9f68-42c4-8f80-8220ec5c2ab4/PolicyonInfoSecurityCybersecurityandPrivacyforSuppliers.pdf?MOD=AJPERES>

SoCalGas Resources

- [SoCalGas Third Party Data Security](#)
- <https://energydatarequest.socalgas.com/>

SDG&E Resources

- [SDG&E Third Party Data Security](#)
- <https://www.sdge.com/customer-privacy>

IOU Panel: Qualifications and Supply Chain Responsibility

Safety





Safety

PG&E Resources

- [PG&E Safety](#)
- <http://www.wednet.org/cgi-bin/getdoctdm.asp?itemid=005778064>

SCE Resources

- [SCE Safety](#)
- <https://www.sce.com/wps/wcm/connect/5bf79cfb-15a4-4f19-970a-0b9b180e95af/ContractorSafetyManagementStandard.pdf?MOD=AJPERES>

SoCalGas Resources

- [SoCalGas Safety](#)
- <https://www.socalgas.com/stay-safe/safety-and-prevention>

SDG&E Resources

- SDG&E Safety
- Contractor Safety Program website under construction

Thank you! Questions?

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Platforms and How to Measure Savings (California Style!)

Marcela Fox

Manager, Custom Solutions Delivery

Ryan Chan

Expert, Commercial Program Manager



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What is a Platform?

Portfolio	EE's collection of Sector-focused programs that enable energy savings					
Sectors	Customer-centric categories that are the building blocks of our portfolio					
Market Sectors	Res	Commercial	Public	Industrial	Agriculture	Cross-Cutting
Cross-Cutting	Codes & Standards		WE&T	Emerging Technologies		Finance
Program	A collection of strategies designed to achieve sector and portfolio goals					
Platform	Rulesets for how PG&E measures, pays for, and claims energy savings: Deemed, Custom, Financing, Behavior, Meter-Based Savings					
Enabler	Drivers that influences portfolio, sector and program activities					

What is a Platform?

- A platform is a construct that connects producers to consumers.
- The producer creates value that the consumer uses.
- The platform provides the infrastructure to connect the two.



Drivers to riders



Owners to guests



Sellers to buyers

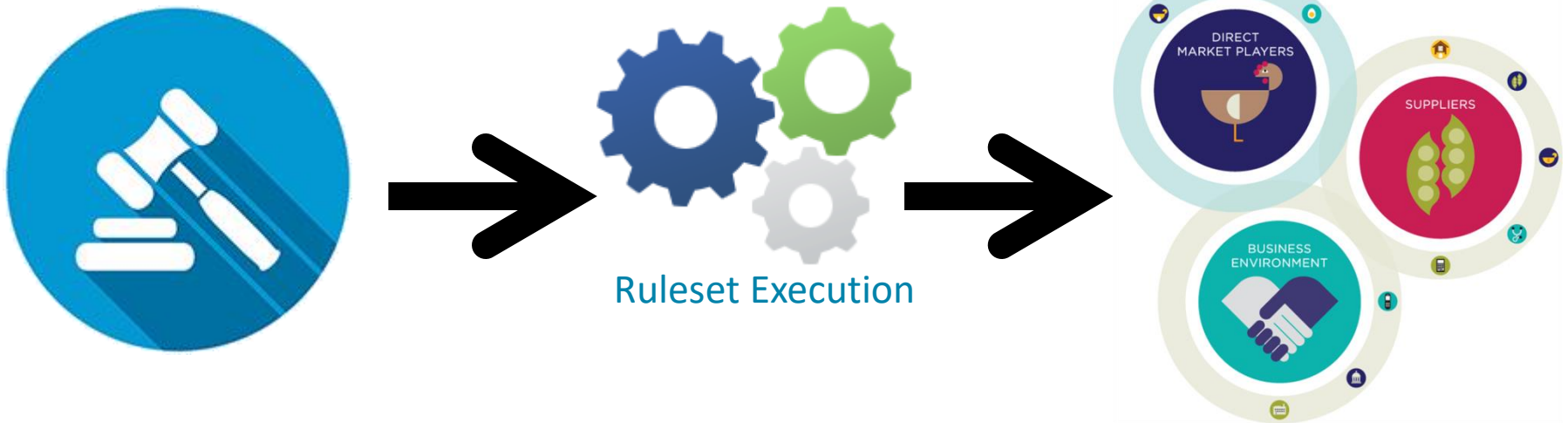


WIKIPEDIA
The Free Encyclopedia

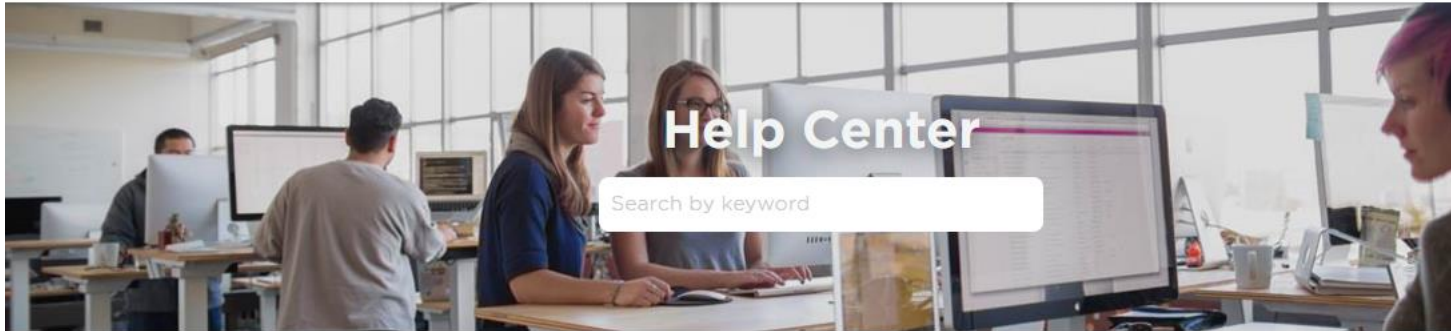
Editors to readers

What is a Platform to EE?

- A platform is a rule set that governs how we connect regulatory objectives to market actors and activities.
- The platform provides the rulesets to connect the two.



All Platforms Have Rules!

[Cities](#)[Help](#)[Explore](#) ▾[Drive with Lyft](#)[Log I](#)

[Lyft Help](#) > [Become a Driver](#) > [Requirements & Applying](#)

Driver requirements

Thanks for your interest in joining our vibrant Lyft driver community. All drivers must meet the following [requirements](#).

Click [here](#) for instructions on starting an application.

Jump to:

- [Age requirements](#)
- [Driving record check and background check](#)
 - [DMV check](#)
 - [Background check](#)
- [State and local requirements](#)
- [Vehicle requirements](#)
- [Driver's license, license plates and insurance](#)
- [Smart phone](#)

Rules Protect:
CUSTOMERS
Ratepayers
Vendors
IOU Administrators

WIN-WIN-WIN-WIN

Summary Example

Regulatory Objective	Custom Project savings must be evaluable
Example of Platform Rules	<p>A) Calculations must be reviewable</p> <p>B) Five year operation minimum</p> <p>C) Measures must be permanently installed</p> <p>D) Detailed M&V Plan must be submitted</p>
Implementer Action Items	<ul style="list-style-type: none"> - Provide detailed documented calculations - Provide evidence of pre-install M&V and post-installation M&V plan - Demonstrate that measure will be in operation for at least five years and permanently installed - Make sure customer is aware that breaking the installation rules puts project at risk of rejection

Parameters of a Platform

Platforms include parameters that Programs must be designed to comply with:

- Basic project eligibility
- Savings determination
- Incentives/Loan rules
- QA/QC expectations
- Payment processing
- Regulatory requirements

“Deemed rebate offering is open to all customers, both residential and non-residential, who (1) receive natural gas and/or electric services from PG&E and (2) pay the Public Purpose Program (PPP)...”

“All energy efficiency measures must have a baseline form which energy savings are assessed...”

“The following data fields may be collected in impact evaluations...”

“Implementer will leverage PG&E Salesforce Energy Insight (EI) for application review and payment processing...”

Key Platform Enabler

- Tool is key for getting projects paid by PG&E
- Most importantly, project data is fed into PG&E's reporting system for CPUC compliance

Third Party Programs and Government Partnership Program Implementer Guide

Verify Account Program Enrollment

1. Log-in to your account
2. Go to the Accounts tab, My Organizations Account Information, click on your Account Name



Why does this matter to you?

In your program proposals, an innovative program must still comply with the Platform rules.

Examples:

- ***Don't*** design a program leveraging the Custom Platform that allows customers to order equipment before the application is approved by PG&E.
- ***Do*** assume that projects leveraging the Deemed Platform will be randomly inspected by PG&E's Central Inspection Team.
- ***Do*** assume that savings on Deemed projects will have to use DEER savings values.

What is “meter-based”?

- A new savings calculation approach – similar to Deemed and Custom
- Synonymous with NMEC (normalized metered energy consumption)
- Formalized in AB 802
- Calculating savings using measured usage data, instead of engineering analysis
 - Using statistics instead of engineering equations
 - “Data” is more than usage data!

A few words on the meter-based platform...

What are good meter-based opportunities?

Generally – areas where traditional calculation methods fail:

- Code baseline constructs
- Multiple measures / whole building
- Measures with limited or unknown persistence
- Behavioral, retrocommissioning, operational (BRO)

A few words on the meter-based platform...

What does “meter-based” mean?

- Two fundamentally different approaches
 - Aggregation – compares a test group to a control
 - Site-specific – compares pre/post for a site

		Sample size	
		Average use-case	Specific use-case
Savings calculation methodology	Engineering equations	Deemed	Custom
	Statistical methods	MB, aggregation approach	MB, site-specific approach

What kinds of things are we thinking about?

- **Savings** – how do we calculate observed vs. gross claimable vs. net claimable?
- **Effective Useful Life (EUL)** – how long do savings persist?
- **Data access and evaluability** – where is the data coming from, and who gets it?
- **Eligibility** – which customers and activities are eligible?
- **Incentive calculations** – who is being paid, and how much?

Food for thought:

- What approach am I using (site-specific or aggregation)?
 - Can I find a comparison group?
- What data do I need?
 - Not just usage data! (e.g. weather, occupancy, production)
 - How will I get that data, now and in the future?
- What customers or use cases am I looking for?
- How will I set the baseline?
 - Again – not just usage data!
- How will I know when savings no longer persist?

Thank you! Questions?

Marcela Fox
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Ryan Chan
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PG&E's Residential Pay for Performance (P4P)

Leif Magnuson

Expert, Residential Program Manager

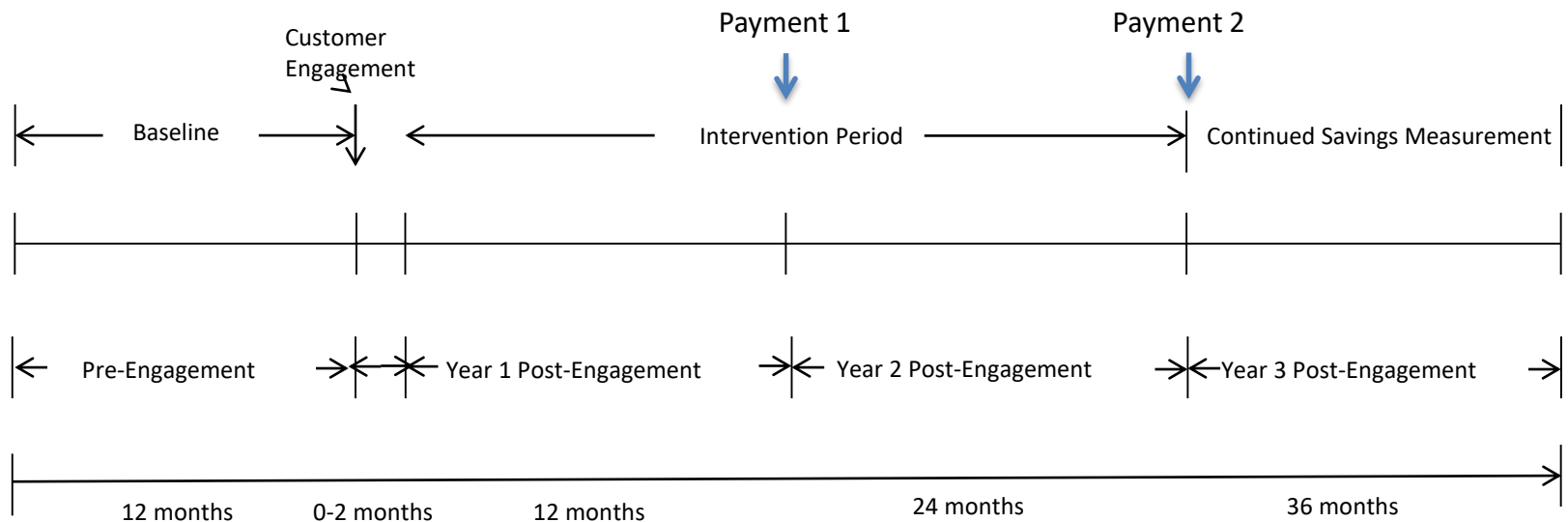


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Payable Energy Savings

- Pre/post analytics
- Savings = pre usage billing data minus post (weather normalized)
- Each participating home is analyzed then summed together to determine portfolio performance. PG&E pays each aggregator for their total savings.

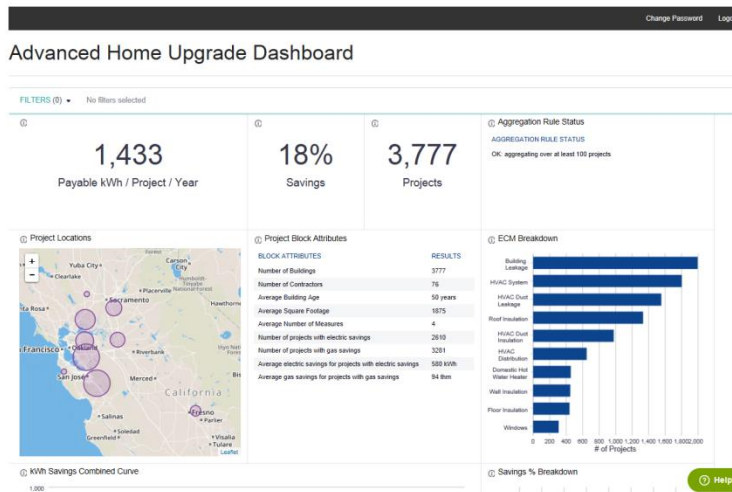
Determined at the meter via weather normalized pre/post billing analysis



What is Res Pay for Performance?



Scalable Residential EE Models



Supportive Data Ecosystem



EE as Grid Resource

Partner with Experts

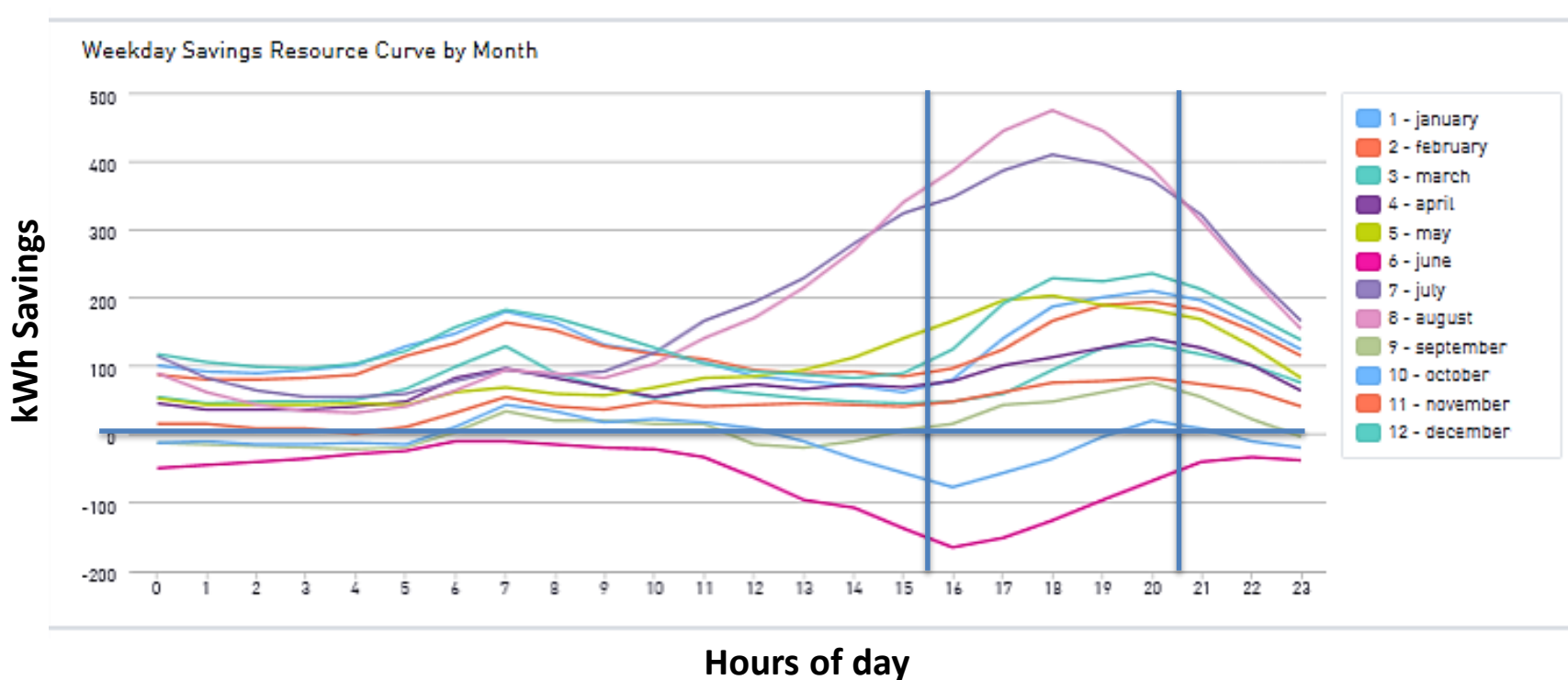


Use the Tools and Information Provided



Looking Toward the Future – Targeting the Most Valuable Savings

2015 Advanced Home Upgrade Savings Curve



The Path Ahead



Thank you! Questions?

Leif Magnuson
L3MZ@pge.com

Lunch Break

In-person: Return at 1:15 p.m.

Webinar: Return at 1:45 p.m.



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Grab Bag!

- Each table will grab a random item out of the bag
- Work with your table team to design an energy efficiency intervention featuring the item (15 min)
- Designate one person on your team to present a *one minute* sales pitch. Include the following:
 - What item did you select?
 - How does it save energy?
 - Why should your customer install this?



Overview of Cost Effectiveness

Jenny Roecks

Expert, Energy Efficiency Strategic Analyst

Doug Naaf

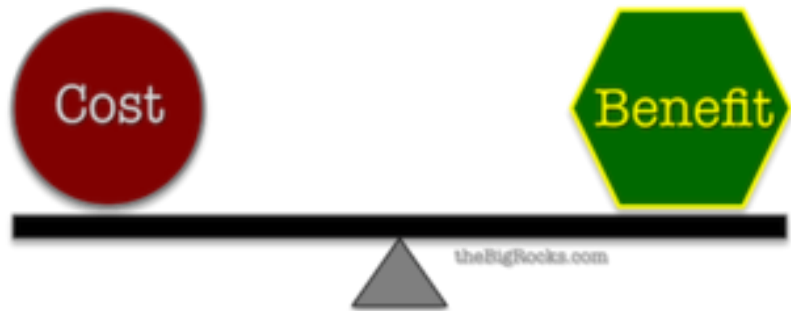
Expert, Reporting & Data Quality Analyst



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What is Cost-Effectiveness?

Concept that for every dollar spent, an equal or greater amount of benefit will be captured



$$\frac{\textit{Benefits}}{\textit{Costs}} \geq 1$$

A portfolio or program is cost-effective if its benefits/cost ratio is greater than or equal to 1

Why is Cost-Effectiveness Important?

Cost-effectiveness ensures effective use of ratepayer funds



The CPUC requires each PA to forecast a cost-effective EE **portfolio** to receive funding
(TRC and PAC ≥ 1)

Optimized **program** TRCs help the PAs achieve cost-effectiveness at the portfolio level

What Cost-Effectiveness Tests do We Use in California?

Program Administrator Cost (PAC)

- Utility perspective, excludes program participant costs

Total Resource Cost (TRC)

- Utility and participant perspective, includes program participant costs
- Most common cost-effectiveness test in other states (with minor differences)

Test to use for program cost-effectiveness

What's Included in the TRC?

$$\text{TRC} = \frac{\text{TRC Benefits}}{\text{TRC Cost}}$$

Benefits	<ul style="list-style-type: none"> • Avoided costs of generation, transmission, distribution • Avoided cost of carbon
Costs	<ul style="list-style-type: none"> • Program costs (admin, marketing, implementation, incentives, etc.) • Measure costs

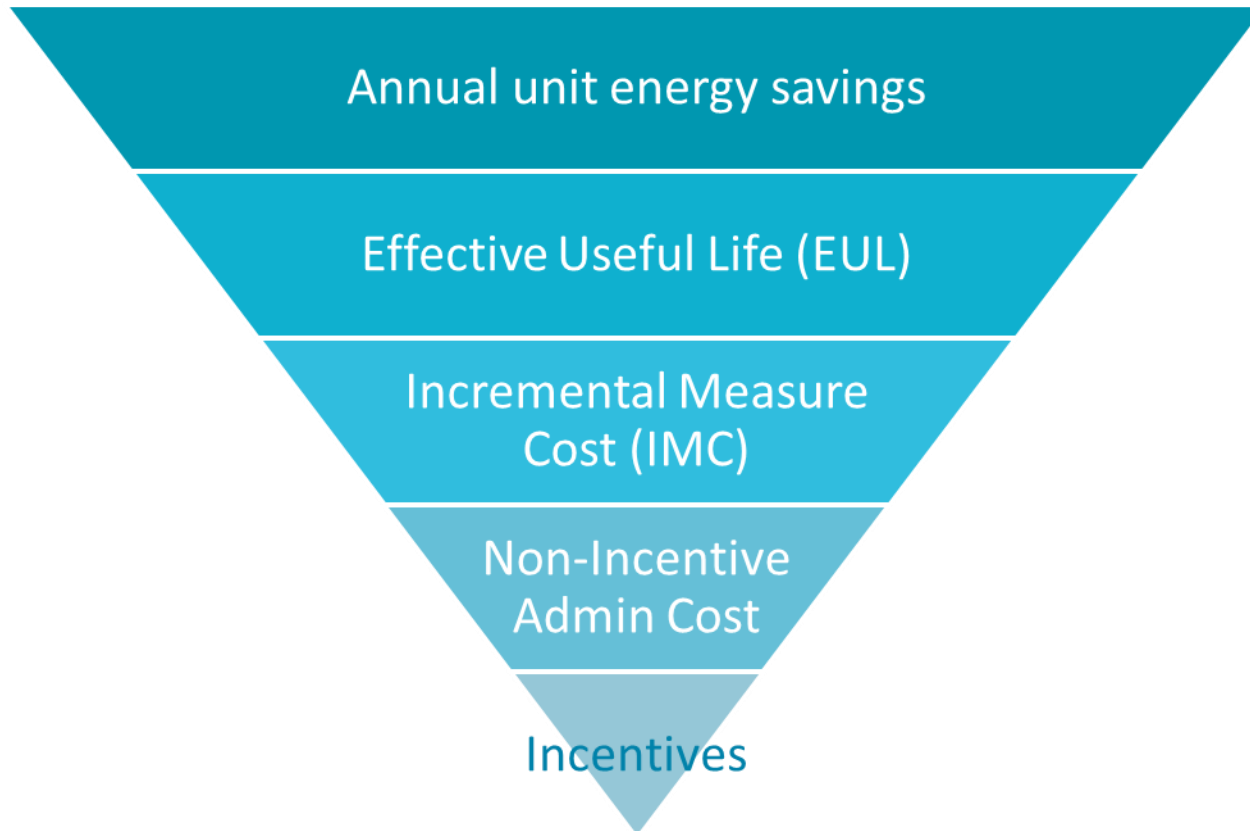
What Program Inputs Feed Into the TRC?

$$\text{TRC} = \frac{\text{TRC Benefits}}{\text{TRC Cost}}$$

	Program Inputs	Fixed Inputs
Benefits	<ul style="list-style-type: none"> • Unit energy and demand savings • Number of units • Measure effective useful life • Location / climate zone • Usage profile • Measure NTG (free ridership, market effects, spillover) 	<ul style="list-style-type: none"> • Avoided generation and T&D costs • Natural gas market price • Market clearance price for electricity • Avoided cost of carbon
Costs	<ul style="list-style-type: none"> • Administrative costs • Marketing cost • Implementation costs • Incremental measure cost • Incentive cost • Measure NTG (free ridership, market effects, spillover) 	

What Inputs Drive Cost-Effectiveness?

Inputs that *generally* impact the TRC the most:

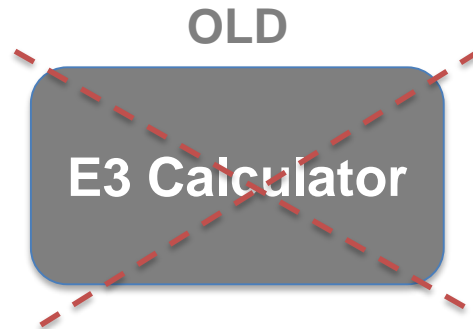


Key takeaway:

Optimizing TRC requires thoughtful program design. Focus on the inputs above when exploring program cost-effectiveness.

What Tool Should Implementers Use?

Using a new tool...



What's new in the CET?

- New, lower avoided generation costs
- GHG adder for avoided cost of carbon
- Updated discount rates

The CET is a useful tool in program design.

What Resources Are Available?

Resource	Description	Location
Platforms Rulebooks	Information on measure parameters (savings, EUL, IMC), rules for measure development, etc.	Coming soon
Cost Effectiveness Tool (CET)	Tool that replaced the E3 calculator, used to calculate TRC	CPUC website: http://cet.cpuc.ca.gov/
California Energy Efficiency Policy Manual V5.0	Overview of CA EE policy requirements, including measure development, cost-effectiveness, term definitions, etc.	CPUC website: http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/EEPolicyManualV5forPDF.pdf
CPUC website on cost-effectiveness analysis	Overview of demand-side resources that undergo cost-effectiveness, links to additional background	CPUC website: http://www.cpuc.ca.gov/General.aspx?id=5267

Thank you! Questions?

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Doug Naaf
DEN2@pge.com

Evaluation: The Basics

Lucy Morris

Supervisor, Energy Efficiency Evaluation

Robert Kasman

Principal, Measurement, Data, and Analytics

Brian A. Smith

Principal, Measurement, Data, and Analytics



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Presentation Overview

- Introductions
- What is EM&V?
- Why do EM&V?
- Who is responsible for doing EM&V?
- EM&V requirements in responses to solicitations

**“...methods and processes
used to assess the
performance of EE
activities...”**

- Department of Energy

**“Things that are measured
tend to improve.”**

-John Kenneth Galbraith

**“There’s no reason to implement
an efficiency program that can’t
be evaluated.”**

- Ryan Chan, PG&E

Three Objectives of EM&V

1. Savings measurement and verification
2. Program evaluation, to improve program implementation
3. Market assessment

Program Implementers (PIs):

Collecting, verifying and delivering data to enable evaluations, and conducting internal program performance analysis.

Program Administrators (PAs):

Accurate data reporting, ongoing market assessment, and conducting program process and performance evaluations.

The CPUC:

Conducting savings impact evaluations and providing statewide oversight.

Response to Solicitation – EM&V Requirements

Required Deliverables:

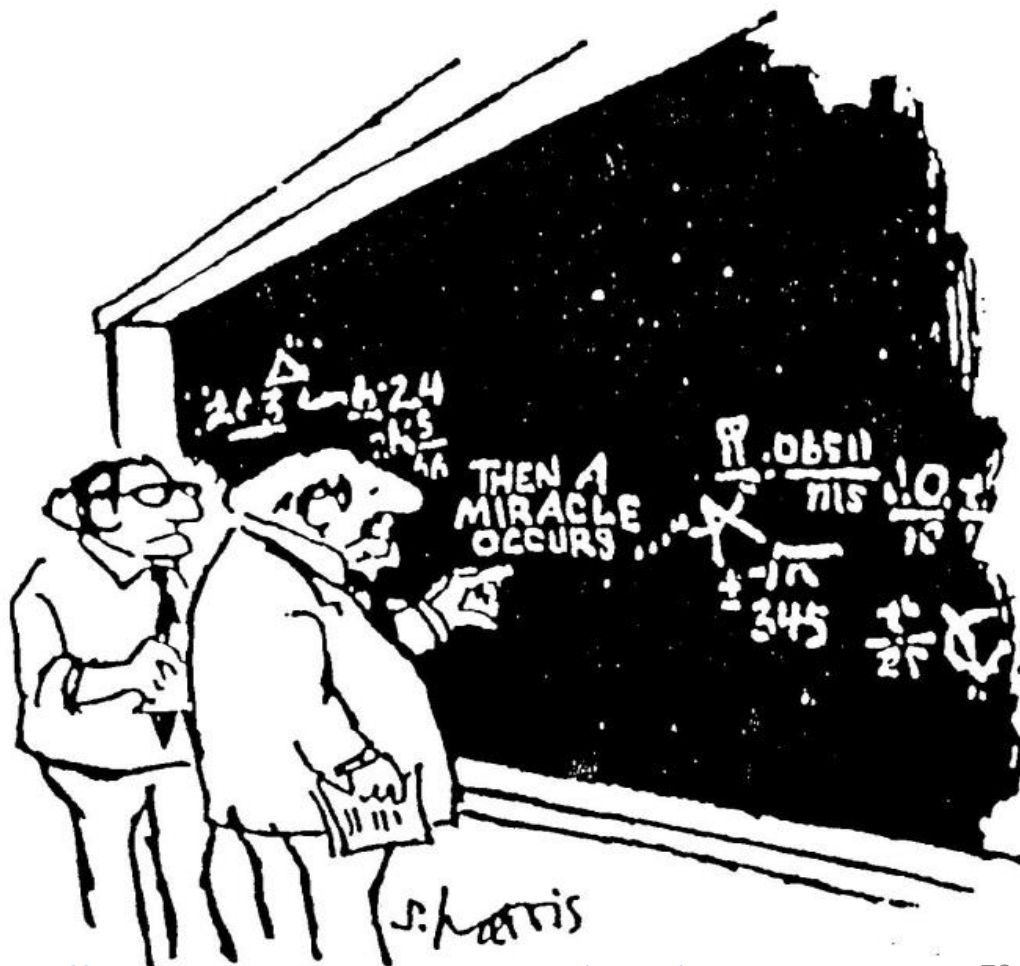
1. Program Theory and Logic Model (PTLM)
2. Proposed Approach for Estimating Savings
3. Key Data Elements to be Tracked
4. Data QA/QC Processes
5. Proposed Program Metrics and KPIs
6. Plan for Conducting Internal Performance Analysis
7. Commitment to Facilitate and Participate in EM&V

1. Program Theory and Logic Model

Roadmap of the causal relationship between:

- Program activities
- Outputs
- Anticipated outcomes

"I think you should be more explicit here in Step Two."



2. Proposed Approach to Estimating Savings

Platforms:

Deemed

Custom

(New Construction, Retrocommissioning, Retrofit)

Meter-Based Savings

(Whole Building, Strategic Energy Management,
Operational Savings)

Behavior

Financing

3. Key Data Elements to be Tracked

Program implementers are best positioned to collect and track key data to support future program evaluation.

Examples:

- Date of installation
- Measures installed
- Existing equipment model, type, age, settings, etc.
- Name of customer decision maker(s)
- Hours of operation

4. Data QA/QC Processes

Program implementers must to ensure data is entered accurately and completely

- Data entry checks (e.g. dates in past)
- Menus providing legitimate entries
- Training for collecting/entering data
- Verification spot-checks by program staff
- Data entry “help aides”
- And more!

5. Proposed Metrics and KPIs

Metrics and KPIs should be useful feedback to Implementers

Ideal metrics/KPIs are:

- Useful without being burdensome
- Provide feedback on success/challenges
- Provide insights for improvements
- Created mostly from data already collected

Examples:

- # of project leads/month
- # of projects completed/month

6. Internal Performance Analysis

Implementers need to identify:

- How they will use their metrics and KPIs
- How they will monitor performance and identify opportunities for improvement
- How program updates will be documented and communicated to the Program Administrator

7. Commitment to Facilitate and Participate in EM&V

Implementers need to commit to support program evaluation

That may include:

- Responding to data requests
- Facilitating interviews with staff and participants
- Enabling inspections
- Providing access to facilities and data
- Participating in embedded evaluation
- Responding to recommendations

Response to Solicitation – EM&V Requirements

Required Deliverables:

1. Program Theory and Logic Model (PTLM)
2. Proposed Approach for Estimating Savings
3. Key Data Elements to be Tracked
4. Data QA/QC Processes
5. Proposed Program Metrics and KPIs
6. Plan for Conducting Internal Performance Analysis
7. Commitment to Facilitate and Participate in EM&V

Thank you! Questions?

Lucy Morris
LLAA@pge.com

Robert Kasman
REKL@pge.com

Brian A. Smith
B2SG@pge.com

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Q & A

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Together, Building
a Better California

Participant Feedback

Please fill out the plus/delta cards at your tables



What are some highlights from this training?

What worked well?

What topics did you enjoy learning about?



How could this training be improved?

What would you like to hear more about?

Watch your email for a link to a post-survey!

Thank you!

Preparing Successful Proposals for Upcoming Energy Efficiency Solicitations in California

Hosted by:



Together, Building
a Better California



Appendix: Post-Read

Preparing Successful Proposals for Upcoming Energy Efficiency Solicitations in California



Together, Building
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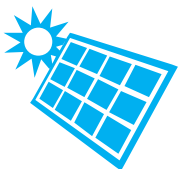
Request for Proposals (RFP) Process Basics Post-Read



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Overall Goals of Outsourcing Strategy

Providing a smooth transition into a new third-party program approach through a set of phased program solicitations.



Seeking innovation that will improve the overall program portfolio performance.



Seeking greater cost-effectiveness and in program delivery.



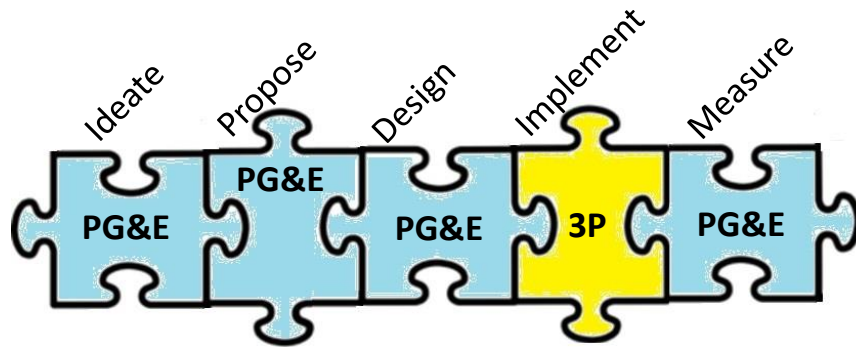
Promoting a healthy and vibrant energy efficiency ecosystem in California, for both large and small providers.



Identifying contract efficiency opportunities, including longer-term contracts and pay-for-performance contracts, with the use of normalized metered energy consumption data where practical.

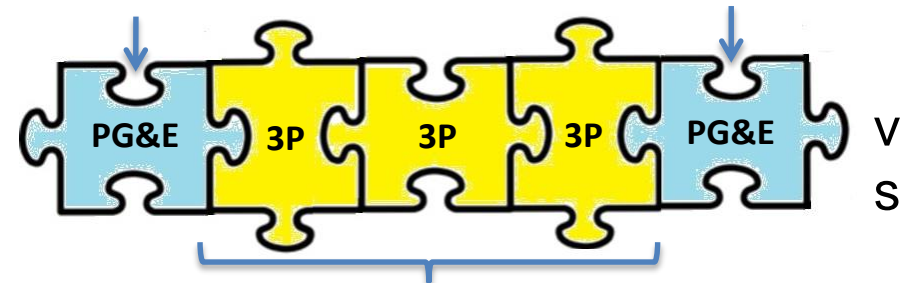
How Will This Be Different From Before?

- Third Party as Program Implementer



IOU describes
portfolio need

IOU measures
performance

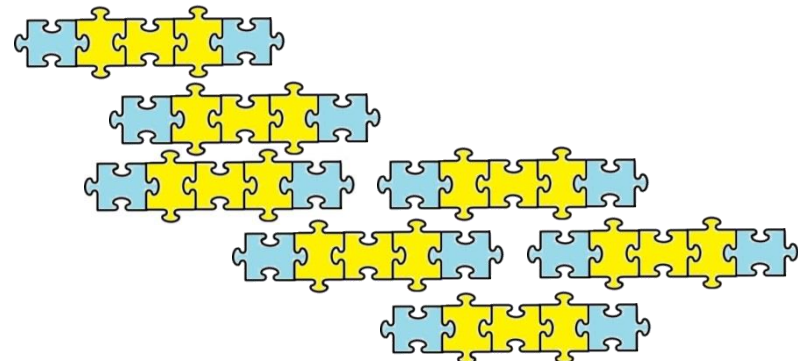


3P Implementers must:

- Propose
- Design
- Implement
- Comply

- IOU as Portfolio Administrator

- Fit all the pieces together



Overview of Utility Procurement Processes

**Request for
Abstract (RFA)**

2-3 Months

**Contract Opportunity
Announcement (COA)**

Bidders Conference

Abstract Scoring

**Request for
Proposal (RFP)**

8-12 Months

Bidders Conference

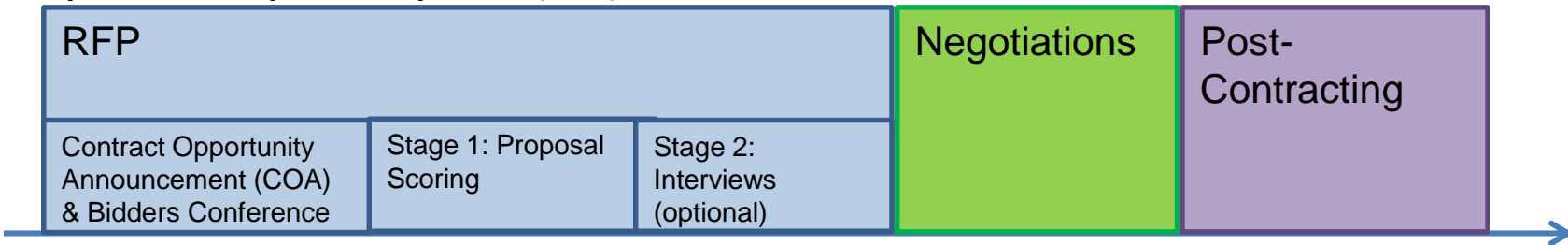
Proposal Scoring

**Implementer
Interviews (optional)**

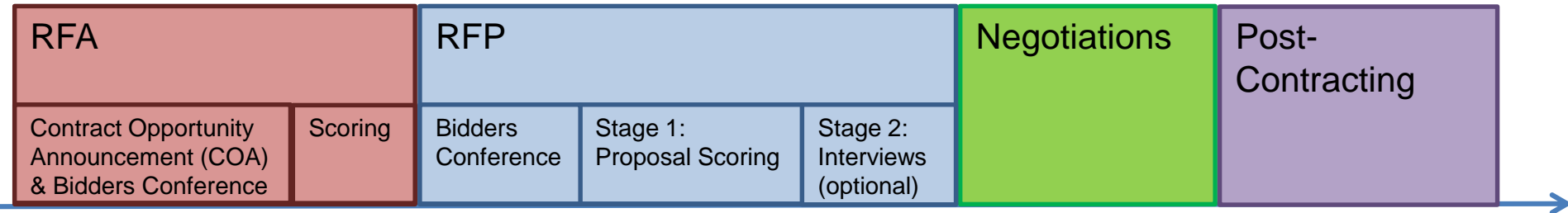
**Shortlisting &
Negotiations**

Detailed Overview of Utility Procurement Processes

Request for Proposal Sequence (RFP)



Request for Abstract / Request for Proposal Sequence (RFA/RFP)



IOUs will employ either the RFP or RFA/RFP process when soliciting for EE Programs

- In RFP process:
 - Participants submit full proposal for scoring and optional interviews
 - Shortlisted proposals advance to negotiations
- In RFA/RFP process:
 - Participants submit short program abstract (business case) for scoring
 - Participants who submitted high potential abstracts will be invited to participate in follow-on RFP
 - For RFP, Participants submit full proposal for scoring and optional interviews
 - Shortlisted proposals advance to negotiations

General RFP Timeline

Anticipated Sequence of Activities and Timeframes for RFPs

- **Month 1:** Contract Opportunity Announcement (COA) released and Peer Review Group (PRG) selected
- **Months 2-3:** Scope of Work (SOW) and Request for Proposals (RFP) released
- **Month 3:** Bidders Conference
- **Months 3-4:** Initial Scoring / Applicant interviews
- **Months 4-5:** Top applicant recommended to PRG
- **Months 5-9:** Contract negotiation (timeline varies greatly)
- **Months 6-10:** Contract execution
- **Months 8-12:** IT security review clearance
- **Months 10-15:** Implementation plan reviewed by stakeholders and PG&E. Program launch.

The RFA process may add 2-3 months to the beginning of this sequence

IOUs are eager to launch new third party programs, and will seek opportunities to streamline tasks where possible, perform some work concurrently where possible, and explore other opportunities to reduce the length of time from solicitation period to program launch.



Contract Opportunity Announcements

PEPMA

- [PEPMA](#)
- <https://www.pepma-ca.com/Public/ContractingOpportunities.aspx>

PG&E Resources

- [PG&E Contract Opportunity Announcements](#)
- https://www.pge.com/en_US/for-our-business-partners/purchasing-program/bid-opportunities/bid-opportunities.page

SoCalGas Resources

- [SoCalGas Contract Opportunity Announcements](#)
- <http://marketing.poweradvocate.com/>

SDG&E Resources

- [SDG&E Contract Opportunity Announcements](#)
- <https://www.sdge.com/request-proposals>

RFP Execution Through Power Advocate

- All Participants who are interested in submitting a bid package will need to do so through the Power Advocate Platform.
- COA respondents will receive an invitation through email to register on the Power Advocate Platform.
- RFP documents and templates will be found in the “Download Documents” tab.
- Proposals and supporting documentation can be submitted in the “Upload Documents” tab.
- All RFP communications should be channeled through the Power Advocate website or specific RFP email box – **DO NOT** directly contact utility personnel in regards to ongoing solicitations.
- Any questions raised by any Participant, may, without reference to the inquiring Participant, be posted to a general Q&A log for all bidding parties to see.
- All correspondence may be monitored by an Independent Evaluator to ensure transparency and fairness of solicitation administration.

Intended to communicate the information and requirements set forth in the RFP materials

- Review solicitation goals and priorities
- Communicate solicitation timeline and process
- Describe evaluation criteria both quantitative and qualitative
- Outline offer submittal process
- Establish solicitation communication channels
- Clarify questions in the RFP process
- Interactive Q&A



Typical Request for Abstract (RFA) Elements

IOU to Provide in RFA Package:

- Description of Portfolio Need
 - Overall Sector Opportunities
 - Subsector Opportunities
 - Statewide Program Reqs.
 - Other Target Segments
- Overall Savings Goals
- Abstract Evaluation Criteria

Bidders to Provide in RFA Response:

- Program Overview
 - Target Customer Segment
 - Platform Utilization
 - Indicative Savings / Goal
 - Indicative Pricing / Structure
- Company Information
 - Contact Information
 - Qualifications & Experience
 - Financials
- Data Requirements

Typical Request for Proposal (RFP) Elements

IOUs to Provide in RFP Package:

- Program Requirements
- Savings Goals
- Performance Metrics / KPIs
- Specification Documents
 - Platform Rulesets
 - EM&V Standards / Guidance
 - Customer Engagement Support
- Evaluation Criteria / Key Selection Factors

Bidders to Provide in RFP Response:

- Detailed Program Proposal
 - Methodology and Approach
 - Customer Engagement Plan
 - EM&V Plan
 - Energy Savings / Pricing
 - Schedule / Deliverables
 - Risk Register
- Company Information
 - Project Management Team
 - Financials / Insurance
- Forms and Questionnaires
 - Supplier Diversity
 - Sustainability
 - Safety
 - Third-Party Security Review

Potential RFP Scoring Criteria

Proposals may be evaluated against some of the criteria listed below

- Program Viability – well developed approach/methodology, program design, proposed schedule, and risk strategy that indicate a high probability of success
- Experience – demonstrated capability to deliver programs
- Price – competitive pricing which delivers on portfolio goals
- Supply Chain Responsibility – strength of supply chain responsibility program and inclusion of small business, diverse, and local suppliers in the ESA Program
- Sustainability – strength and breadth of Sustainability program
- Safety – strength and breadth of Safety program

IOUs will select winning contractors who offer the best overall value for program execution and portfolio fit.

www.caeec.org

HOME | COORDINATING COMMITTEE | REGULATORY DOCUMENTS | BP AND IP INFO | MEETINGS | More

Welcome to the California Energy Efficiency Coordinating Committee Website

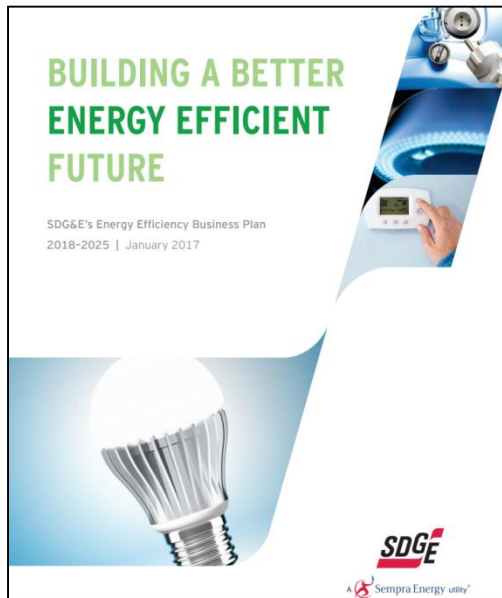
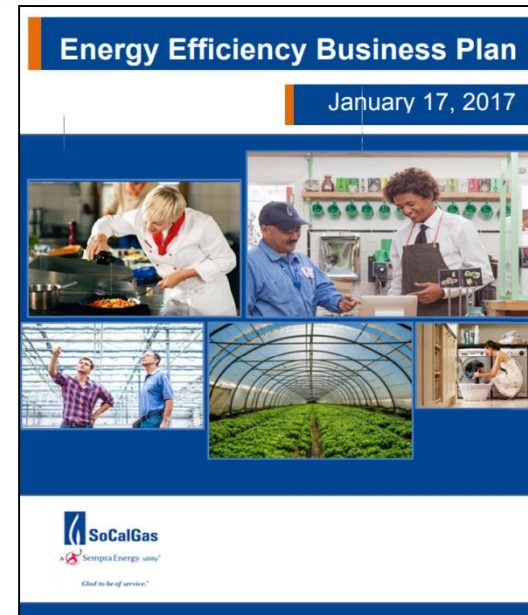
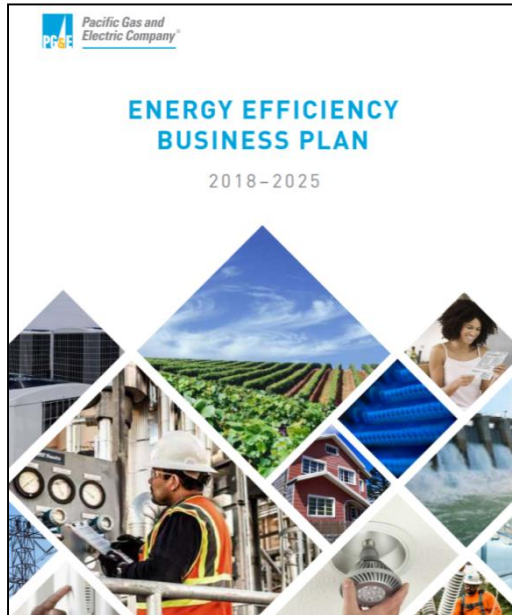
The California Energy Efficiency Coordinating Committee (CAEECC) and its subcommittees were authorized by California Public Utilities Commission (CPUC) Decision 15-10-028. This forum is the venue by which stakeholders can provide input into the development of the Program Administrators' energy efficiency Business Plans, Implementation Plans, and related matters that are central to Energy Efficiency portfolios approved by the CPUC.

Upcoming Events

SEP 7	CEC Integrated Energy Policy Report Workshop: Draft Commission Report to Establish Targets that Achieve a Statewide Cumulative Doubling of Energy Efficiency Savings in 2030 -- This is not a CAEECC event
	☐ Thursday, September 7
	🕒 10:00am-10:00am
	📍 Energy Commission's Art

Add yourself to R.13-11-005 Service List

Read the IOUs' Business Plans!



Application No.: A.17-01-013
Exhibit No.: SCE-02
Witnesses: G. Barsley,
J. Mack,
K. Rodriguez,
M. Thomas,
M. Wallenrod,
T. Weber,
K. Wood

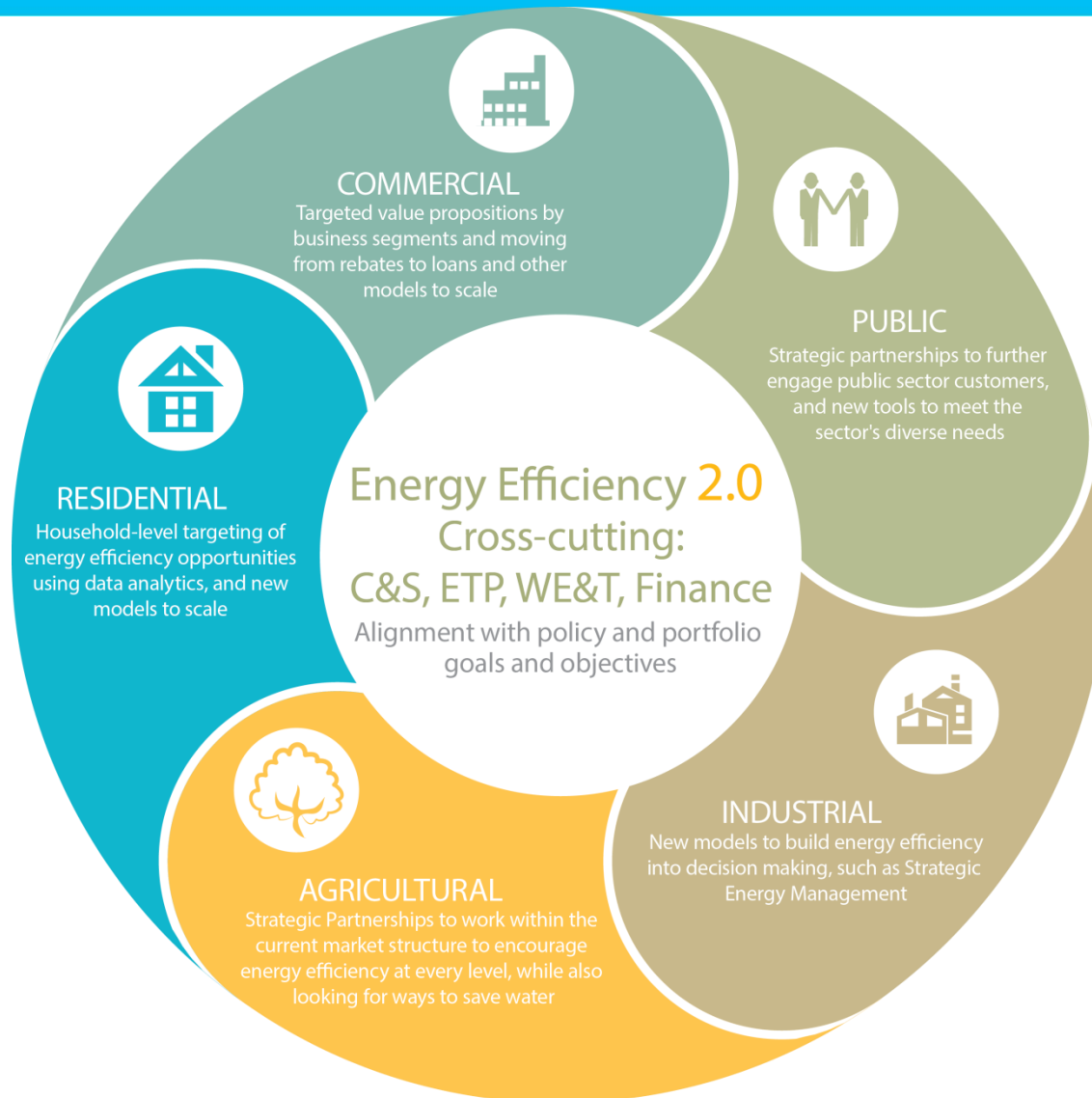


(U 338-E)

***Southern California Edison Company's Amended
Energy Efficiency Rolling Portfolio Business Plan For
2018-2025***

Before the
Public Utilities Commission of the State of California

Business Plans Move Us to a More Customer-Centric Approach to EE



Note: This graphic represents PG&E-specific information, but sectors are consistent across all IOUs

Four Key Elements Serve as the Storyline for Each Sector

1

Sector Vision and Goals

- What the sector is trying to achieve

2

Sector Characterization

- Who are our customers, trends impacting them, and barriers to EE participation

3

Intervention Strategies and Tactics

- How we plan to achieve our goals
- What partners we need to help achieve these goals

4

Sector Metrics

- How we plan to measure achievement towards goals

Review Updates to Sections in our Business Plans



Get to Know Key Resources...

1

Program

- [CA Energy Efficiency Strategy Plan \(CEESP\)](#)
- [CA Existing Buildings Action Plan \(AB 758\)](#)
- [EE Policy Manual v.5](#)
- [CA Energy Efficiency Evaluation Protocols](#)
- [CA Measurement Advisory Council \(CALMAC\)](#)

2

Technical

- [Energy Efficiency Goals and Potential Studies](#)
- [California Energy Data and Reporting System \(CEDARS\)](#)
- [Ex Ante Review Custom Process Guidance Documents](#)
- [Database for Energy Efficiency Resources \(DEER\)](#)
- [Cost Effectiveness Tool \(CET\)](#)

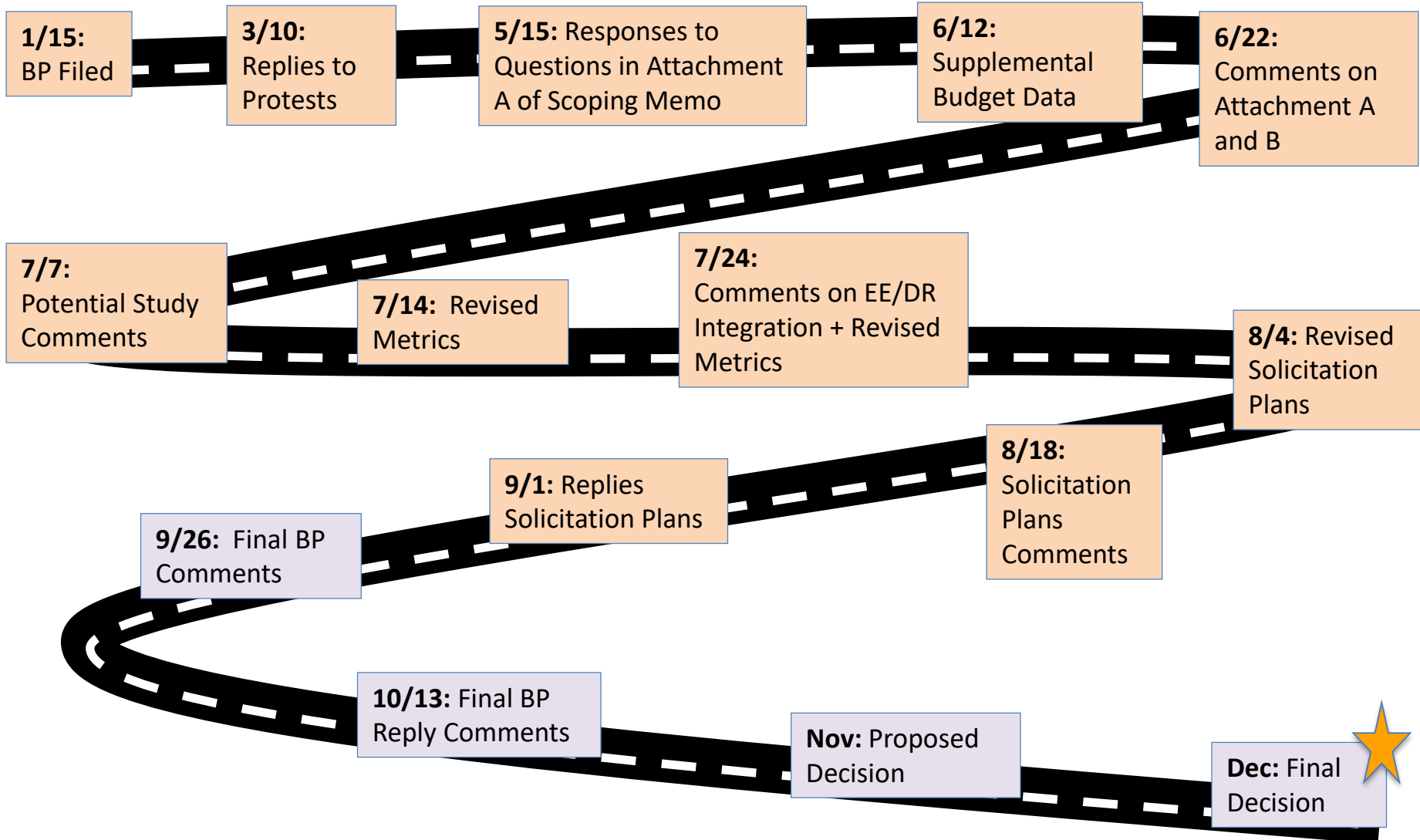
3

Policy and Regulatory

- [D.13-11-005 Rulemaking](#)
- [D.14-10-046 2015 EE Program Budgets](#)
- [D.15-10-028 EE Rolling Portfolio Mechanics](#)
- [D.16-08-019 Guidance for EE Rolling Portfolio Business Plan Filings](#)
- [SB 350](#)
- [AB 802](#)
- [AB 793](#)
- [SB 1414](#)
- [SB 32](#)
- [Executive Order B-18-12](#)

Note: This list is not exhaustive. Find more resources in [IOUs' Business Plans](#) and on the [CPUC's website](#)

Business Plans Road to Approval!



Qualifications and Supply Chain Responsibility Post-Read



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Pre-Bid Pre-Qualification

(Reference main presentation in “Qualifications & Supply Chain Responsibility” section for all IOU resources)

Certain RFPs may require Pre-bid Pre-Qualification in order to move to review by the proposal evaluation team. The following are examples of common pre-qualification requirements. A pre-qualification may require only 1 or up to all 4 of these examples depending on the program.

Proposal Screen		Pass/Fail
A	Pre-Qualification Responses	Pass
	<i>The bidder's information included all the required sections as outline in the instructions by required date</i>	
B	Bidder's Contractor's License in good standing	Pass
	<i>Contractor's license must be uploaded to Power Advocate</i>	
C	Bidder Financial Information	Pass
	<i>Bidder D&B and/or last 2 years of Audited financials uploaded to Power Advocate</i>	
D	Safety	Pass
	<i>Contractor Safety Questionnaire completed and uploaded to Power Advocate and meets PG&E requirements. Suppliers will be expected to provide EMR, last three years of DART and TRIR.</i>	

Supplier Code of Business Conduct

(Reference main presentation in “Qualifications & Supply Chain Responsibility” section for all IOU resources)

The Supplier Code of Business Conduct:

Sets forth the values, principles and standards of conduct by which the utilities expect employees, suppliers, contractors, and sub-contractors to uphold while providing goods and services for the companies.

In support of this Code of Business conduct, Bidders must:

- Conduct their business in compliance with all federal, state and local laws, rules and regulations
- Ensure that the Code of Business Conduct is shared with all individuals assigned to perform work for or on behalf of the utilities and that all work and related tasks are executed by individuals with the skills, expertise and certifications necessary to uphold the principles and meet the standards of the Code

What should bidders be aware of? What can they do now to prepare?

- Bidders should be aware of the requirements, policies and Supplier Code of Conduct for each IOU



Supply Chain Responsibility Guidelines

(Reference main presentation in “Qualifications & Supply Chain Responsibility” section for all IOU resources)

- **IOUs are committed to supply chain responsibility which includes supplier diversity, sustainability and ethical supply chain practices.**
- **Bidders can maximize the points they receive in a RFP for Supply Chain Responsibility by demonstrating the following in their response:**
 - a) strong program results with small, diverse businesses
 - b) examples of outreach and supplier development
 - c) description of how subcontracting data is tracked and reported
 - d) submittal of a subcontracting plan to include small, diverse businesses
 - e) a commitment to sustainability and an ethical supply chain
- **All bidders are expected to answer the Supply Chain Responsibility questions and submit an Exhibit 1-A as part of their bid response.**
 - Bidders must include ALL subcontractors and Business Solution Partners that they plan to use to perform PG&E work.
 - Bidders must identify those businesses that are small, minority, women, service-disabled veteran, LGBT, etc.)
 - Bidders and Bidder’s subcontractors are expected to be registered as a small business, hold a CPUC Clearinghouse certification or both should they qualify.
 - NMSDC and WBENC certifications are also encouraged.

*Note: Products and services must be specific to PG&E business

Third Party Data Security

(Reference main presentation in “Qualifications & Supply Chain Responsibility” section for all IOU resources)

According to SCG Tariff Rule No. 42, complying with data security policy requires Bidders to

“...implement reasonable **administrative, technical, and physical safeguards** to protect covered information from unauthorized access, destruction, use, modification, or disclosure.”

What does this mean to bidders? Why is this topic important?

- If a Bidder's proposal requests non-public customer energy data, Bidders must comply with the utility's minimum data security requirements and policy.
- Data security compliance is mandated by state and federal law.

What should bidders be aware of? What can they do now to prepare?

- Bidders should be aware of minimum requirements and policy as well as be prepared to include in their proposals that they have appropriate **administrative, technical, and physical safeguards to** receive and store data.
- If a Bidder knows they do not meet the minimum requirements, but still want to submit a proposal, they should include an action plan describing how they will comply with policy should they win the bid.
- Note, energy usage data by zip code, by Residential, Commercial and Industrial markets, aggregated per CPUC mandates is posted for four quarters of 2015, 2016 and half of 2017. This data is public and can be downloaded from the link below. <https://energydatarequest.socalgas.com/>

Contractor Safety

(Reference main presentation in “Qualifications & Supply Chain Responsibility” section for all IOU resources)

Contractor Safety

In the “**EHS Handbook** for Contractors” Section 6 which is inclusive in the SCE bid package, states Contractors shall ;

- Ensure the work procedures do not conflict with the requirements of SCE policies, standards, and programs.
- Take precautions for the protection of the health and safety of Contractor personnel , SCE’s employees, or other exposed persons including the public.
- Ensure that all specialized equipment (aerial lifts, cranes, man-lifts, fork trucks etc..) are operated and maintained in accordance with manufactures specifications and as required by applicable regulations.

Subsections of Section 6 (*Health & Safety Requirements*) addressed ; Confined Space Entry, Fall Protection, Fire Prevention, Hazard Communication, Heat and Illness Prevention Plan, Hot Work, Housekeeping / Cleanup, Industrial Hygiene, Lockout / Tagout, Trenching & Excavations, Use of SCE Facilities, Material, Equipment and Vehicles, Work Area Protection and Traffic Control and High Voltage Work.

SCE Core Elements of Safety Program

(Reference main presentation in “Qualifications & Supply Chain Responsibility” section for all IOU resources)

- **EHS SAFETY CULTURE** : A compilation of questions chosen by SCE that relates to the company's safety culture, organization and internal processes.
- **EHS SAFETY PERFORMANCE** : Combination of safety statistics pulled from contractor OSHA forms.
 - A. TRIR (Total Recordable Incident Rate): Total recordable incident cases x 200,000 divided by the number of exposure or employee hours.
 - B. DART (Days Away/Restricted or Transfer Rate): [(Number of days with cases away from work + number of days with restricted job transfer work days) x 200,000] divided by the number exposure of employee hours.
 - C. Fatalities: Fatalities recorded during the past 3 calendar years.
 - D. Citations: Current and past citations reviewed from the OSHA, MSHA, and EPA public data bases.
- **EXPERIENCE MODIFIER** : A rate that is assigned to a company by their workers compensation carrier or regulatory agency to either discount or surcharge the company's workers compensation premium depending on loss history.
- **FORMAL WRITTEN EHS PROGRAM** : The contractor's written health and safety program that are applicable to the type of work they perform for SCE.
- **LICENSING, REGISTRATION and CERTIFICATIONS** : Documentation uploaded by the contractor, which is provided by the California Contractors State License Board.

A Case Study and Call for Networking: PG&E's Residential Pay for Performance (P4P) Post-Read



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P4P Summary

- PG&E launched California's first Residential Pay for Performance Program in August, 2017 (P4P Phase I)
- Meter-based analysis determines savings and incentive payments
- P4P provides much more freedom for program design and delivery
- Phase II of PG&E's Residential P4P program set to launch in early 2018 (RFP: Q4 2017)
- We anticipate selecting 2 – 4 additional savings “aggregators”



P4P Phase I and II Comparison

P4P	Phase I	Phase II
Context	High Opportunity Program or Project (HOPP) enabled by AB802	Key program model proposed in Business Plan to enable 3P program design and delivery
Size	~5% of Res portfolio	\$10-30M
Incentives	Paid to aggregators after determination of year 1 and year 2 pre/post metered savings	Payments tied to metered savings. Minimum 6 months post intervention for payment.
Objective	Deliver cost effective savings by any means possible	Deliver cost effective savings and achieve Key Business Plan goals



PG&E Residential Business Plan

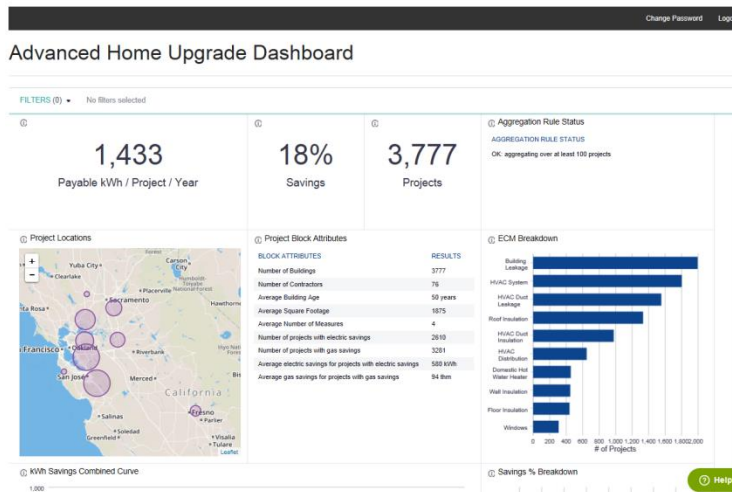
Residential Sector Vision:

“Deliver a portfolio that will achieve deep energy savings and robust grid benefits through focused customer engagement, data driven programs that leverage market actors, and strong partnerships. We will strive to enable programs that are targeted for greater impact and coupled with financing options to deliver customers savings that show up at the meter.”

What is Res Pay for Performance?



Scalable Res EE Models



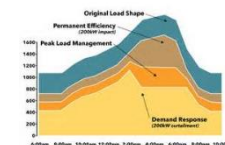
Supportive Data Ecosystem



EE as Grid Resource

Unparalleled flexibility to pursue a range of improvements and activities over time to achieve residents' savings goals

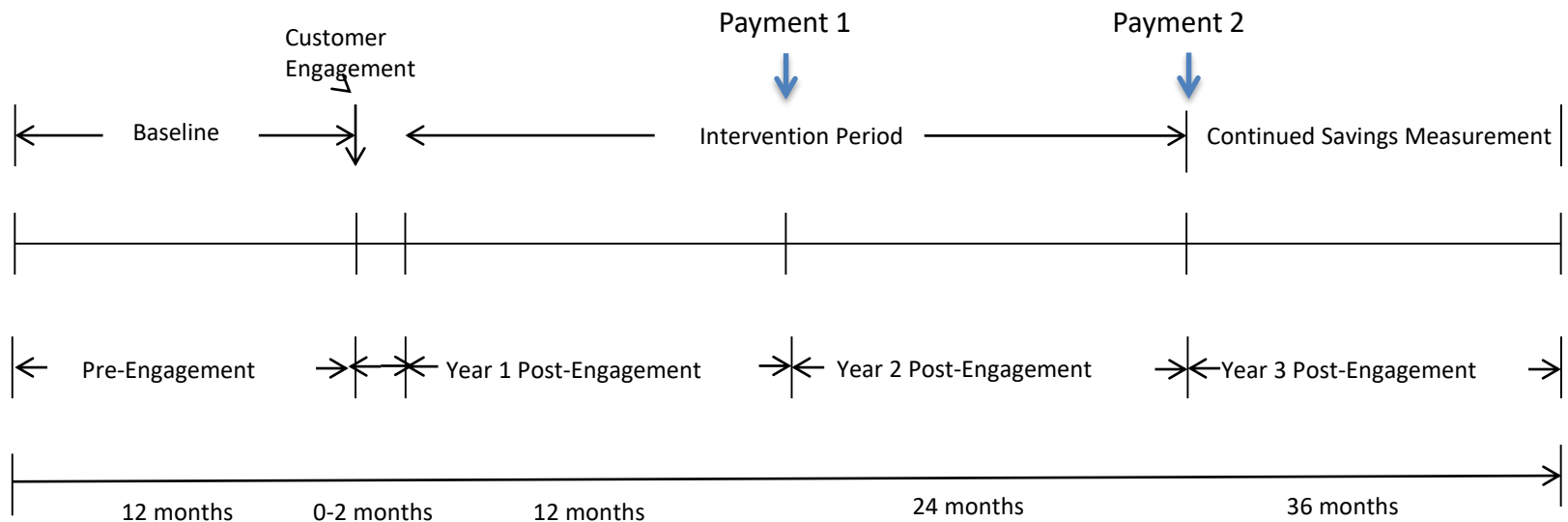
- Whole House
- HVAC
- Lighting
- Outdoor/Pool Deck
- Smart Thermostats
- Home Energy Management Systems
- Smart Appliances
- Homeowner Incentives
- Demand Response
- Other specially designed programs



Payable Energy Savings

- Pre/post analytics
- Savings = pre usage billing data minus post (weather normalized)
- Each participating home is analyzed then summed together to determine portfolio performance. PG&E pays each aggregator for their total savings.

Determined at the meter via weather normalized pre/post billing analysis





BIG Proposal Highlights

Experts Make Good Partners



Cost Effective Measures



Manufacturer rebates

Expert Partner



Innovative Financing



Innovative Incentives

TRC Seals the Deal

Your Home



Your Stuff

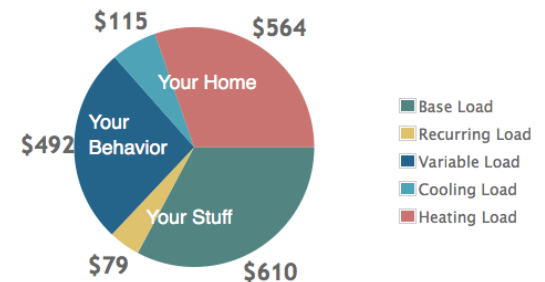


Your Behavior



Your Energy Loads

First, let's see where you spent \$1,860 over the past twelve months. Here's the breakdown in different load categories:





PG&E Residential Business Plan

Key Residential Sector Priorities for P4P:

BIG **HEA**

- **Align EE savings with high procurement costs and grid needs**
- **Drive deep retrofits**
- **Optimize TRC and PAC**
- **Incorporate financing offerings into programs to reduce up-front costs for customers and better utilize incentive dollars**
- **Address building shell and HVAC energy waste with high-quality, comprehensive offerings for customers**
- **Target customers with high savings potential via data analytics**
- **Accelerate adoption of Home Energy Management Systems and connected homes**

x

x

x

x

x

x

x

x

x

x

x

What is PG&E Looking For?

In the Phase II P4P bid, PG&E is likely to reward:

- Cost effective savings observable at the meter
- Scalable program models
- Innovative approaches
- Effective partnerships
- Strategies that address key Business Plan and policy goals
- Excellent service for our customers

Lessons Learned from Round 1

Partner with Experts

- Unsuccessful Bidders:
 - Had trade partners, but might have benefitted from:
 - IOU proposal writing expertise; not something they usually do
 - partnering with a successful IOU program implementer, at least as an advisor, to help them bridge the business-IOU/CPUC ruleset divide.
- Successful Bidders:
 - BIG partnered with EGIA who brought a loan program, equip. manufacturers who could offer customers \$1,500 rebates, mfg.-affiliated contractor pool and customer targeting information.
 - HEA is partnering with local governments and environmental groups, and their proposal demonstrated a clear track record of working successfully with them
- Partners you will be relying on to deliver specific elements of your program should be included in the proposal and signed-on as committing to their deliverables, although some specific relationships can be developed later: e.g. HEA local governments, BIG T-Stat Vendor



Lessons Learned from Round 1 (Cont.)

Use the Tools/Resources Provided

- Unsuccessful Bidders:
 - Didn't use the cost calculator provided because they couldn't or weren't willing to estimate the number and type of measures installed or the unit energy savings of those measures, or
 - Used the cost calculator, but made alternative calculations that raised the cost tenfold and destroyed the TRC/PAC for PG&E. Made assumptions about what payments should be that were outside the scope of the bid (new program, aggregator bears more risk so payments should be high). The RFP bid process makes proposals very competitive on pricing.
- Successful Bidders:
 - Used the cost calculator provided in the way it was intended.
 - HEA also provided an alternative analysis with adjustments that committed them to longer service and savings delivery that improved their proposal, at no cost to PG&E. HEA used the Cost Effectiveness Tool to determine the number of years of service they would provide at no additional cost and the amount of energy savings those additional years of service would generate that would guarantee a favorable TRC and PAC for PG&E.
 - BIG used the Advanced Home Upgrade program energy savings data provided to inform their bid, especially what areas to target and what measures to install.



Survey Results from Round 1: Bidders/Non Bidders

No Upfront Payments

- Issue: No upfront payments was a big concern. The bid was easier for larger companies to propose than smaller companies because an initial upfront payment would be crucial for initial investments.
- Response: Minor changes. We got acceptable bids without upfront payments from both very small and medium-sized firms. We recommend partnering with other entities and/or loan options and we are willing to make a first payment after 6 months instead of a year, but the payment must be based entirely on the energy savings achieved at the meter and include clawback provisions if the savings don't persist for at least 2 years. To mitigate clawback risk, we will allow aggregators to add new customers to replace existing customers who drop out because they add solar, buy an EV or perform a major remodel, all of which can negatively impact energy savings. The goal is to ensure that the savings persist.



Survey Results from Round 1 (Cont.)

Requirements too strict

- Issue: Many found that the application and the customer reporting and data requirements were too strict and in some cases, irrelevant.
- Response: Little/no changes. The requirements from the first round are based on 3 sets of requirements that we are unable/unwilling to change:
- A) CPUC regulatory requirements, e.g. no ROB, no fuel switching, aggregators must collect and report measure level data to determine EUL, savings must persist for at least two years, behavioral programs have a one year EUL.
- B) PG&E contracting requirements, e.g. safety screening, PG&E site inspections to verify measure installations and CAS testing (5%), criminal background checks for employees entering a customer's home.
- C) Practical considerations, e.g. customer must have been a PG&E customer for at least 12 months to create an accurate baseline, enrolled customers may not participate in other PG&E residential rebate programs during their P4P participation period to prevent double dipping/double counting, customers may not have solar unless the aggregator can provide verifiable solar production data, if the measures you end up installing change your EUL (weighted average of the measures installed) by more than 10%, then bid amount may be renegotiated.



Survey Results from Round 1 (Cont.)

Other Improvements

- Issue: Many companies support P4P in theory but question term, payment, and energy savings uncertainties
- Response: Moderate Changes.
- Term: traditional measure installation program proposals will be measured for minimum of 2 years, behavioral up to 5.
- Payments: can be made after just 6 months but must persist.
- Energy Savings: the CalTRACK data methods that will be used to calculate energy savings are published at docs.caltrack.org. PG&E will provide dashboards to aggregators and aggregators may develop their own dashboards using customer data from share my data and the open source code that PG&E will provide without license fees. PG&E will provide more energy savings information from specific residential programs we currently manage during the RFP process so help bidders make more accurate energy savings estimates and optimize their targeting and measure mix.



Next Steps (Draft – stay tuned)

PG&E Issues Contract Opportunity Announcement (Oct 2017)



PG&E Issues RFP (November 2017)



Bidders provide projected energy savings, disclose their target market and propose interventions and prices (December 2017)



PG&E selects finalists and executes “Power Savings Agreements”
(Q1/Q2 2018)

Overview of Cost Effectiveness Post-Read



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Common Metrics

Test	Key Test Objective
Participant Cost (PCT)	Does participant benefit?
Program Administrator Cost (PAC)	Does the utility benefit?
Total Resource Cost (TRC)	Do both utility and participants benefit?
Ratepayer Impact (RIM)	Do rates decrease or increase?
Societal Test (SCT)	Does society as a whole benefit?

Metrics: TRC vs. PAC

	TRC	PAC
Perspective	<ul style="list-style-type: none"> Societal: Participant & Utility 	<ul style="list-style-type: none"> Utility
Benefits	<ul style="list-style-type: none"> Avoided cost of energy due to net energy savings of the program 	<ul style="list-style-type: none"> Avoided cost of energy due to net energy savings of the program
Costs	<ul style="list-style-type: none"> Admin Implementation Measure costs for non-free riders Incentive costs for free riders 	<ul style="list-style-type: none"> Admin Implementation Total incentives

SAME

Different

Who is a Free Rider?

Who is a Non-Free Rider?	A customer who participates in an EE program because of available rebate/incentive.
Who is a Free Rider?	A customer who receives a rebate/incentive, but would have invested in the EE measure regardless of available EE programs
What is Net-to-Gross (NTG) ?	NTG is a ratio that estimates which portion of customers who invested in an EE measure are true Participants (Non-Free Riders)

Simplified Example:

If $NTG^* = 0.70$

- 70% of EE Participants are Non-Free Riders
- 30% are Free Riders

*Excludes spillover and market effects.

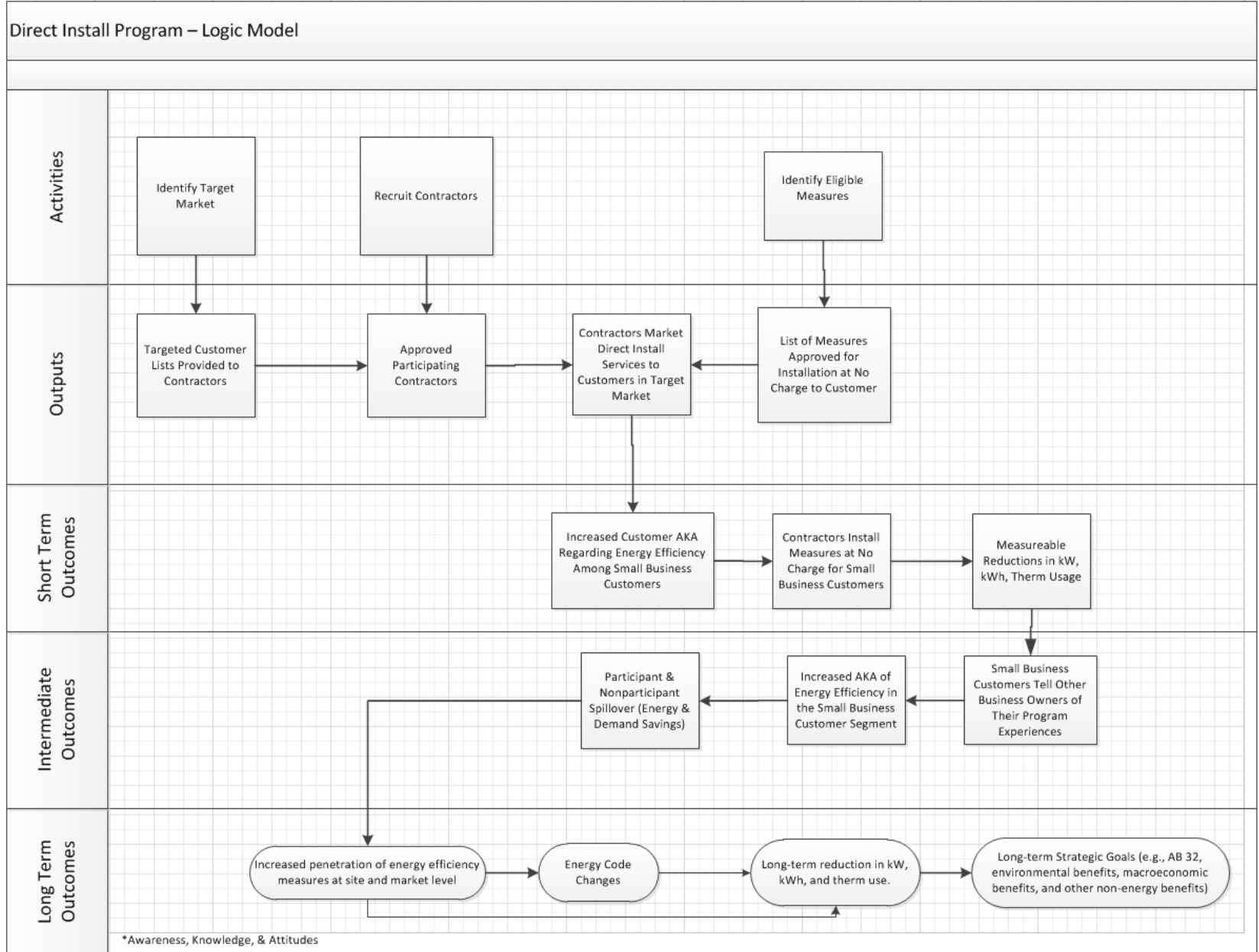
Evaluation: The Basics

Post-Read



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Example of a Program Logic Model



Information Sources

1. EE Program Impact Evaluation Guide published by SEE Action
2. CPUC's EM&V Plan (V. 5) available at www.energydataweb.com
3. CA Evaluation Framework available at www.calmac.org
4. CA EE Evaluation Protocols available at www.cpuc.ca.gov
5. Uniform Methods Project available at www.energy.gov
6. Designing and Managing Programs: An Effectiveness-Based Approach (Book by Peter M. Kettner)
7. Putting Your Money Where Your Meter Is: A Study of Pay-for-Performance Energy Efficiency Programs in the U.S. (Natural Resources Defense Council). Available at <https://www.nrdc.org/experts/merrian-borgeson/can-paying-performance-increase-energy-savings>